Environmental Restoration Contractor **ERC Team**

Meeting Minutes

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SUBJECT **GROUNDWATER/VADOSE ZONE INTEGRATION PROJECT MEETING - JANUARY 8, 2001**

TO Distribution

FROM Michael J. Graham, Groundwater/Vadose Zone Integration Project Manager

DATE January 15, 2001

ATTENDEES
See Attached List

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NEXT GW/VZ INTEGRATION PROJECT OPEN MEETING:

Next Meeting:	Monday, February 5, 2001 – 1-3 p.m.
Location:	Bechtel Hanford, Inc., Assembly Room (Badging Required)
Local Call-In Number:	(509) 376-7411
Toll Free Call-In Number:	(800) 664-0771

MEETING MINUTES:

A Groundwater/Vadose Zone (GW/VZ) Integration Project Open Meeting was held on January 8, 2001, in Richland, Washington, at the Bechtel Hanford, Inc. (BHI) Assembly Room.

PROJECT REPORT:

Schedule Update (Michael Graham)

I have been gone for a couple weeks. We have made a few changes since our last meeting, however, none of them are major changes to the schedule. I will continue to have this schedule in front of us because it is a useful tool.

Integration Project Expert Panel Close Out Report (Virginia Rohay)

Next on the schedule is the Integration Project Expert Panel (IPEP) Closeout Report from our last meeting. We got it electronically last Thursday. We haven't received a hardcopy yet. Virginia has gone through the report and will provide a brief update. Paper copies are available for those who would like one.

Question Have you read it Virginia, are there any showstoppers?

Answer: As you will see there are specific observations and recommendations for each meeting topic. I think it follows along with the closeout briefing when the panel was here.

Comment: One thing I picked up in scanning the document is that there is a lot of recommendations relative to core projects and we will need to work through the United States Department of

Energy, Richland Operations Office (DOE-RL) to see how we manage these recommendation and how they gets passed to core projects. For instance, the recommendation that the Integration Project should institute a systematic analysis of past ecological work to determine its relevance to current critical Integration Project questions. That is something we would have to look at because that kind of review is not in the scope of the Integration Project for this year.

Question: Is that an ecological baseline study or something like that?

Answer: The meeting covered historical work and they are saying to look at the body of work and determine if it is relevant to Hanford and the Integration Project. I don't know who you would have do that.

Comment: It makes you wonder how we became an ecological monument when there is so much contamination.

Response: We will have to digest the recommendation as a project and figure out what to do.

As you will notice when you read it, they have differentiated between recommendations and observations, things for consideration that aren't recommendations.

Last week the IPEP confirmed that the next meeting will be held on April 25-27 as meeting number nine.

Comment: It looks to me that there are more recommendations than we have seen in the past, more specific things we can respond to.

Comment: Recommendation number three on page 20 catches my eye. " The near-Columbia River modeling should be expanded to include particle tracking of solutes, more realistic boundary conditions, and extend the simulations to include other locations." That implies impact assessment. Are you equipped to do that yet? What kind of timeline are they talking about and do you have the tools to do it?

Response: Natural attenuation will be part of any evaluation cleanup process alternatives. (Mike Thompson)

Questions: What will it consist of: The cost of doing nothing, or something, or the cost of ecological and human impact?

Answer: I would hope that a cost and benefit analysis would be part of what we would do.

Comment: Dib Goswami has been following some of that with the issue with the Pump and Treat at N. Dib can you comment.

Response: We will be having a couple of meetings on the strontium; one is tomorrow.

<u>200 Area Update</u> (Bruce Ford/Bryan Foley)

We want to give an update on the 200 Area. In the Hanford Advisory Board - Environmental Restoration (HAB-ER) Committee tomorrow there will be a formal presentation on the 200 Area. I would also like to

say that we delivered 200-PW-2 (Uranium-Rich Process Waste) Draft A Workplan to the regulators for review and comment, this meets TPA Milestone M-13-25. Bryan Foley will summarize our presentation for tomorrow.

We will be presenting at 1:00 p.m. tomorrow, first on the agenda for the afternoon. The HAB-ER requested an update on 200 Area Remedial Action work. There are approximately 800 wastes sites that have been organized into 23 process-based operable units. We will talk about the focused approach developed through the last six month during the Schedule Options Study. There will also be a presentation on Canyon Disposition Initiative and the 200 Area end points.

Questions: How many 200 Area workplans are finished with planning underway?

Answer: Three workplans (200-CW-1, 200 CW-5 and 200-CS-1) have been issued as Revision 0 final documents. Two workplans (200-TW-1/TW2 and 200-PN-2) have been submitted to the regulators for review and comment.

Comment: The plan is to be in the field within a month or so.

Comment: Actually, it is the end of February that we will be in the field to do work at two operable units and hopefully moving to chemical sewer sites later in the year.

Tank Farm Drilling Update (Tony Knepp)
We have drilled through a metal waste plume near tank BX-102 and we are currently at about 230 feet. We have 30 more feet until we reach groundwater. We will then go to the B-110 leak. That kind of problem has occurred at a number of locations. The goal for BX-102 plume drilling is to be done in 30 days and then go to the other site and begin immediately. At one time we were going to drill boreholes to better locate the plumes, but there is no room for both a borehole and the cone pen push, so Ecology has given the go ahead to proceed. We are on schedule and things are going well for drilling this year. We haven't had problems like in other years.

Question: What is the timeline for T-TX?

Answer: November of this calendar year, which is next fiscal year. We are trying to get the planning done early in July and August, with the workplan accepted in June or July. We will need to test the vertical hole at least once before going into the Tank Farm because of the contamination.

Question: Is there still liquid in T-TX?

Answer: I think that T Farms are empty, but I'm not sure and will need to go back and check that out. There could be sludge. There are essentially 30-40 tanks that are empty, depending on your definition of empty.

Comment: We will be drilling in early February the borehole in the ILAW site at the eastern edge. That will take 2-3 weeks. It is a virgin site since there hasn't been any activity for about 30 years. On December 19th we gave to DOE-RL and DOE-Office of River Protection (ORP) Draft A of the performance assessment for Immobilized Low Activity Waste (ILAW). We hope to send it to DOE-Headquarters (DOE-HQ) for review at the end of March.

Question: What does it consist of?

Answer: It is trying to predict public health and environmental impact for the next 10,000 years from the disposal of glass logs. Whenever there is a significant change in information we are required to send to DOE-HQ a new performance assessment. A lot of things have occurred during the past three years, such as the type of glass and disposal concepts.

Question: What are your assumptions of what is left behind?

Answer: I assume that the tanks are clean. I take everything out and maximize the impact at my location. I do not perform analysis of tank leaks or tank closure.

Comment: That is one of the concepts for the System Assessment Capability (SAC). Fred Mann has determined he is okay and that he has passed his gate. Then Klein has the bigger gate and he must determine that he is okay with everything. SAC is the tool to help him do that.

Comment: It is long overdue. Individual ones can influence the milestones in accordance with risk.

Response: There are two three-ring binders that document the data that went into the assessment that is there. This information can be found on the GW/VZ Integration Project website. Groundwater calculations are now coming out. The performance assessment, which puts everything together, will be out in the spring.

Question: If I understand what you did, the impact you found are minimal because you have cleaned the tanks, is that correct?

Response: I only look at the glass logs, I leave the tanks out of my assessment.

Comment: For what you have described, there isn't much impact. If there is we have a real problem.

Response: In 1998 we looked at performance goals and one was protecting the groundwater. At that time we estimated 2 millirems, which is significant. Since then the impact has been reduced greatly. In May of last year we put out a white paper, which is also on the GW/VZ Integration Project website, that reduced the estimate about a factor of 100. It is now about .02 millirems. Since then we have reduced it a bit more. I can say that ORP is using the information to optimize the vitrification plant design, looking at significant savings. The studies are ongoing.

Comment: There are a whole lot of good ways to spend large amounts of money.

Response: From the estimates, we are looking at significant budget reductions.

Comment: In terms of the schedule you can see the ILAW at the bottom. The 200 Area work is highlighted about a third of the way up. We have had a significant effort to collect new data. We have done a good job of maintaining a balance.

National Science & Technology Roadmap Update (Michael Graham)

I wanted to spend a little time and talk about the National Roadmap effort. I have been asked to serve as a member of the Executive Committee to help transform their current plan into an actual roadmap that can

benefit the entire complex. I didn't bring the website with me, but I will have Karen include it in the meeting minutes (http://vadosezone.inel.gov/Frames/default.htm). The current draft was submitted at the end of last fiscal year as a complex-wide roadmap for vadose zone issues. The problems we are wrestling with in the Integration Project are not unique to Hanford. They assembled an impressive number of scientists and academicians to put together a science plan that lays out current gaps in vadose zone hydrology. It doesn't touch groundwater and the river, only fracture and porous flow in the vadose zone. It lays out 62 individuals who participated in development of a document that captures over a 25-year period. It is not yet a roadmap driven by needs of the sites. They did that to get it pulled together. This year they will be picking up the stakeholder and user focus. Jan Brown, who was active in community public involvement, was hired by the lab to lead the public involvement efforts. The question is, "How do you do meaningful public involvement on a national level?" They are involving the Western Governors Association, science boards, and reaching out to advisory boards to have them articulate key issues and needs at their sites. It is in the early stages and they are starting to get their act together. They want to get it done quickly and do something that resembles more of a complex-wide/national roadmap.

Question: What is the timeline?

Answer: I think they are trying to get Fiscal Year 2003 money and trying to get some plus up for Fiscal Year 2002.

Question: It is strictly vadose zone?

Answer: Yes.

Question: What site has fracture flow?

Answer: Idaho, their fracture basalt is killing them.

Question: Do they have a central focus? Are they building something?

Answer: They are building a problem solving (computational) environment. Also, a test facility on a mega scale to perform large-scale tests under controlled environments. There is a big focus on flow of transport issues.

Question: How deep is their groundwater?

Answer: Over 1,000 feet, with heavily used aquifers.

Comment: Glad to hear you are involved.

Response: The next meeting is in February and is tentatively scheduled in Salt Lake City. Dan Stevens was there at this last meeting and is the chair of the committee.

Question: They are going to implement stakeholder involvement this year?

Answer: There will be focus group sessions through the spring and then they will try to have a write-up on what they heard and the key issues by the summer. I can get you a contact Shelley.

Comment: The HAB has talked about a potential for a national workshop on groundwater. We are

considering a proposal in February in Nevada to do just that. I'm wondering about the timeframe. Should we move it out to Fiscal Year 2003? This could dovetail nicely.

Response: Dan Stevens was the leader of the effort for the plan on the web. Shelley, I will get with you.

Comment: It's good working with all government agencies. It's a national problem and warrants a coordinated effort.

Comment: Please provide status reports.

Question: Is there a Science and Technology effort to evaluate near river monitoring data? I'm noticing it here in the IPEP report.

Answer: I can't answer about a report or not, the scope is part of the groundwater/river interface to enhance numerical monitoring. We need to look at old data before we do new sampling. That's Bob Peterson's work and I can find that out for you.

Comment: I'm just curious to know.

Response: I will find out for you (Michael Graham).

Environmental Management Science Program Workshop CDs (Steve Sautter)

At the last Environmental Management Science Program (EMSP) Workshop a commitment was made that we would make available the presentations electronically. They have been placed on the website and we have copies of the presentations on CDs today. If you would like a hardcopy, please let either myself (Steve Sautter) or Mark Freshley know. Be aware that if you are going to log onto the website you will need a high-speed connection to access the information.

Comment: Idaho could use an advocate like you (Mary Harmon) back there at DOE-HQ. The GW/VZ Integration Project wouldn't have gotten very far without an advocate like you. They need someone to help get them through the maze.

Response: I will check with Sally and see who is covering it.

Response: Also, it is on Mark Frei's screen, and I will continue to report.

Question: What is in the fractures at Idaho?

Answer: Some are filled and some are open. They are very much different from those that were studied at B-Whip. They have standing pools, which cooled very slowly. Idaho didn't have large pools and so you have smaller flows rather than large lakes of basalt. Their fractures are entirely different.

Comment: They have some technetium 99 and a lot of transuranics. They have some serious problems.

Question: Do they detect it in groundwater?

Answer: Oh yes, big time.

Comment: I ran across an interesting article in Ecology. It might be useful in dealing with the 618-11 tritium plume. It's a great idea for interim action before the technology is available. What they did was pave the area and install rainwater runoff to divert it so it wasn't above a disposal site. They excavated a little and then controlled the runoff. Relatively inexpensive.

Question: Was it a burial ground or contaminated soil?

Answer: Contaminated soil with slag from smelters. They crushed the slag and then when it rained it leached heavy metals into the soil and then into the groundwater.

Question: Is anything happening on characterization of tritium?

Answer: It hasn't gotten through the internal review process yet.

UPCOMING EVENTS (Michael Graham

Tomorrow there is the HAB-ER meeting here in the Assembly Room. I have a copy of the agenda if you are interested.

The holidays hit us twice this month, that's why we are meeting today. Next week is canceled due to Martin Luther-King federal holiday.

Question: Shelley, Gordon, do you know what the focus is for the full HAB meeting?

Answer: I'm sorry, but I don't. I know there will be a big send-off for Merilyn Reeves.

Question: There is a research paper that was published about salmon redds at Hanford and contamination affecting sexing. Is anyone aware of that study?

Answer: There was an article in the Tri-City Herald three or four weeks ago. The speculation was that it was caused from agriculture runoff, not radionuclides.

Question: Was the research funded on the site?

Answer: It was done by PNNL, but not funded by DOE.

Response: We will trace down the article. (Two articles found with URL locations listed: http://www.tri-cityherald.com/news/2000/1216/story2.html and http://www.tri-cityherald.com/opinion/2000/1228-1.html).

NOTES:
GW/VZ Web Site location: http://www.bhi-erc.com/vadose

If you have questions or comments, please contact Steve Sautter (509-372-9692) or Alison Kent (509-372-9192).

ATTACHMENTS:
1) GW/VZ Integration Project Two Month Look Ahead Calendar

ATTENDEES:
Marty Bensky – Tri-City Caucus
Shelley Cimon – Hanford Advisory Board
Dirk Dunning – Oregon Office of Energy (by phone)
Bryan Foley – DOE-RL
Dib Goswami – Ecology
Michael Graham – BHI
Mary Harmon – DOE-HQ (by phone)
Kathy Huss – SAIC (by phone)
Tony Knepp – CHG
Fred Mann – CHI
John Morse – DOE-RL
Gordon Rogers – HAB
Steve Sautter – BHI
Stan Sobczyk – Nez Perce Tribe (by phone)
Karen Strickland – BHI
Virginia Rohay – CHI
Mike Thompson – DOE-RL

CCN: 085691

GW/VZ INTEGRATION PROJECT

JANUARY 8, 2001 – APRIL 27, 2001

FOUR MONTH LOOK AHEAD CALENDAR

January 8	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
January 9	HAB-ER – 9:00 a.m. - 4:30 p.m. (BHI Assembly Room, Richland, WA)
January 15	**CANCELLED DUE TO HOLIDAY GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
February 1-2	HAB, Kennewick, WA (West Coast Hotel)
February 5	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
February 19	**CANCELLED DUE TO PRESIDENTS DAY HOLIDAY GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
March 5	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
March 19	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
April 2	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
April 5-6	HAB
April 10	HAB-ER
April 16	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
April 25-27	IPEP Meeting (BHI Assembly Room, Richland, WA)